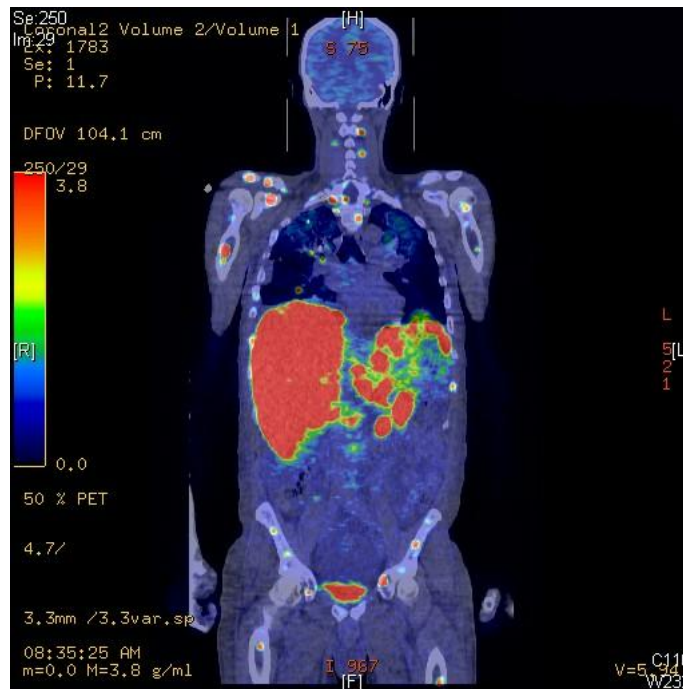


## Positron Emission Tomography (PET Scans)



- Procedure Description – PET (Positron Emission Tomography) is an imaging technology that looks at the metabolism of patient’s soft tissues. PET scanners are different than Nuclear Medicine gamma cameras but they are similar in that they detect radioactivity. PET scans can be used to look at tumors, heart disease and brain disease. Our PET scanner is a hybrid scanner that is docked to a CT scanner. This allows for the patient’s PET data to be “fused” to the CT data, which increases the accuracy of both imaging modalities.
- Procedure Expectations – The patient is injected with a radioactive glucose compound and 45 minutes later the scan is obtained. For PET Brain scans, just the head is scanned. For PET Heart scans, just the chest is scanned. For PET Tumor scans, generally the patient is scanned from the base of the brain to the pelvis. For Melanoma and Multiple Myeloma, the patient is scanned head to toe. The scan will take 20 – 30 minutes. All patients will have a blood sugar check (finger stick) just prior to their injection.
- Procedure Preparation – The patient needs to be NPO (nothing by mouth) four hours prior to their injection. Patients can follow their normal activity levels prior to the scan and can take their medications following their physician’s instructions. Once the patient is injected, they will be asked to sit quietly with little or no movement or talking because the radiopharmaceutical may distribute in the muscles rather than the soft tissues. The patient will be asked to empty their bladder just prior to their scan. In certain indications, patients may need to have a urinary catheter placed to keep the bladder empty during the scan.
- Procedure Limitations – The table weight limit for a PET scan is 400lbs. Patients that have had previous Nuclear Medicine exams may need to wait a day before receiving a PET scan, depending upon the isotope they received in the previous exam. Patients with blood sugar levels above 180mg/dl cannot have a PET scan because the radiopharmaceutical will not be taken up by the soft tissues.

- Procedure Scheduling – PET scans are scheduled every 30 minutes from 7:00am to 4:00pm Monday thru Friday.
- Clinical Considerations – PET scans can be used to look at:
  - Oncology indications, such as Lymphoma, Melanoma, Lung cancer, Colorectal cancer, Head and Neck cancer, Breast cancer, Thyroid cancer, Esophageal cancer and others. Patient with Anal cancer, Cervical cancer, Prostate cancer, Ovarian cancer or Uterine cancer will need to have a Foley urinary catheter placed.
  - Neurology indications, such as seizures, strokes, Alzheimer's disease, Parkinson's disease, vasculitis, Lyme's disease, Picks disease.
  - Cardiology indications, such as acute MI, myocardial ischemia, myocardial infarction, myocardial viability.
- Sedation Considerations – Patients usually do not need to be sedated to have a PET scan. Pediatric patients may need to be sedated, depending upon their activity levels.
- FAQ's

Q: Does a PET scan make me radioactive?

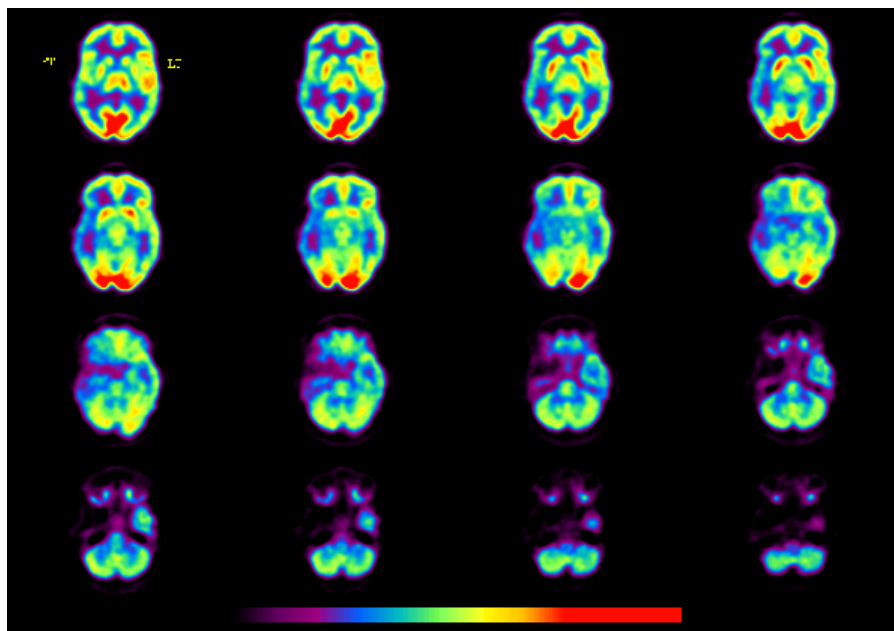
A: Yes, but the radiopharmaceuticals used are given in tiny amounts, they lose their radioactivity very quickly (usually within hours) and they pass out of the body quickly (usually within 24 hours).

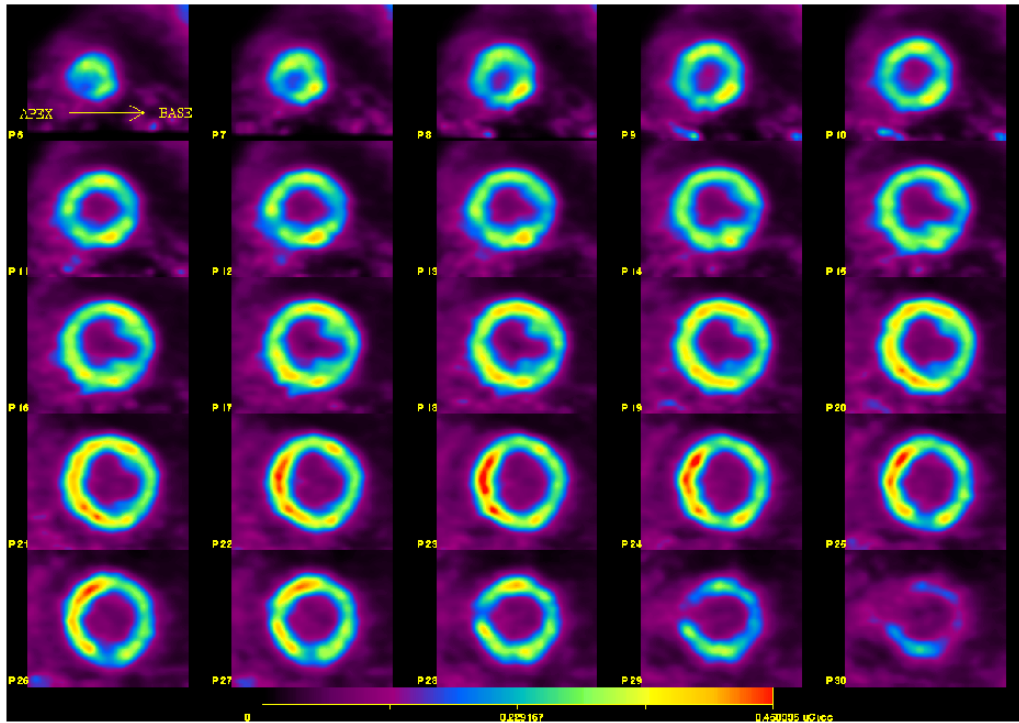
Q: Do PET scans hurt?

A: No. Other than the minor discomfort of a needle stick, PET scans are painless.

Q: Who should not get PET scans?

A: They are generally not recommended for women who are pregnant or breastfeeding, but nearly everyone else can have these scans.





For more information about PET at the University of Kansas Hospital, check out our website at [www.rad.kumc.edu/nucmed/index.htm](http://www.rad.kumc.edu/nucmed/index.htm)